
Hawaiian Medicine

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Long before other societies of the world dared to sail the open seas, Polynesians, isolated from the rest of the world, developed the fundamental art of distant navigation. Before the second millennium, Polynesians sailed the thousands of miles to the relatively small land masses of Tonga, Tahiti, Samoa, and Hawaii. These volcanic islands, because of their origin and isolation, possessed few plants and animal life necessary for human survival.¹ The Polynesians who settled Hawaii used their astounding knowledge of astronomy, meteorology, and navigation to undertake the sailing expedition of over 2,000 miles to Tahiti and Marquesas to bring back the necessary plants and animals to sustain life for a large group of people.

The progressive subjugation of the Hawaiian nation began with the discovery of the Sandwich Islands (Hawaii) by Captain James Cook in 1778, and the visit of Captain George Vancouver in 1793. Justifying the conquest, historians regarded the natives of the Sandwich Islands as primitive neolithic beings who lacked a written language. They depicted the Hawaiians as savages: Constantly engaged in territorial warfare, wearing little or no clothing, worshipping many idols, not believing in monogamy, totally immoral, engaging in infanticide, and occasionally offering human sacrifices with religious ceremonies. The Hawaiian social order was castigated. They falsely claimed the ruling class controlled the lower caste as slaves, engaged in sexual relationships with and intermarried close relatives; they imposed many *kapu* (restrictions) on the women, including food restrictions and isolation in compounds during their menses. "They are firm believers in sorcery. With reference to their sick, there is no possibility that these primitive beings could possess any knowledge of botany and the medicinal uses of plants and other substances..."¹

A proper evaluation of Hawaiian medicine requires a firm contradiction of false concepts promulgated by biased historians regarding all Hawaiian history and culture (Corroborated in a conversation with Dr George Mills, 1980).¹ A proper evaluation must also look at the quality of life in the Western world at the time. The noted Scottish poet Robert Burns, we know, was a contemporary of Captain James Cook and George Vancouver. Burns wrote of the Thames River contaminated with sewage, amputation of the hands of women who were caught stealing bread, his dread of living beyond 43 years (the normal lifespan of the people of his period), and his imprisonment in the last days of his life because he owed a debt of 10 pounds. No one can refute the injustices found throughout the history of Western civilization: Burning of so-called witches at the stake in New England and central Europe, the massacre of the American Indian, the shooting of Australian aborigines when they came for drinking

water at the watering pens, and the fact that slavery in the United States did not end until 1865 after one of the greatest civil wars of all humankind. The relationships and marriages between relatives of Hawaiian royalty that were branded as barbarous consanguineous relationships and incest were contemporarily sanctioned by the Church of England and the Vatican for European royalty.

I clearly recall Dr Charles Judd's evaluation of Western medicine during the discovery era. At that time, puerperal fever was rampant in England and Europe, especially in maternity hospitals where spread of the infection was promoted by the unwashed hands and instruments of attending personnel. Regular bathing was an unknown ritual at that time. Only much later, in 1847, L.P. Semmelweis of Vienna called attention to the washing of hands with antiseptics before attending women during childbirth.

Digitalis was first introduced into medicine as a diuretic for dropsy in 1775 by William Withering of Birmingham, England, who recognized the dried leaf of the common foxglove as the active ingredient of an old woman's secret formula. It was not used for cardiac dysfunction until much later. In 1795 the British Navy mandated the use of lime juice for its sailors on long ocean voyages, when it was discovered that limes, lemons, or fresh vegetables were necessary to prevent scurvy. In 1798 K. Jenner introduced cowpox vaccinia as an immunization against smallpox. W.T.G. Morton demonstrated in 1846 the potential of ether as a surgical anesthesia. Venesection (blood letting) and the use of leeches were used for many diseases. There was no effective medication for pneumonia, infectious diseases, or sepsis. In the period as recent as 1936 at Jefferson Medical College Hospital, renowned for its surgery and treatment of infection and where I served my 27-month internship, only the following important medications were available:

- Insulin for diabetes—discovered by Banting and Best, 1922.
- Digitalis
- Atropine and belladonna—derived from *Atropa belladonna* and known to the ancient Hindu.
- Morphine—derived from the poppy plant, isolated in 1803.
- Quinine—derived from the bark of the Cinchona tree. The Indians of South America used it for more than two centuries, but quinine was not isolated until 1820.
- Colchicine—derived from autumn crocus and used for gout.
- Theophylline—a purine derived from tea leaves and used as one of the major drugs for bronchial asthma.
- Cocaine—derived from cocoa leaves.
- Ephedrine—derived from the *ma huang* plant indigenous to China.

- Adrenalin
- Oxytoxin
- Oxygen
- Ergotamine
- Anesthetics

Pneumococcal immune serum for lobar pneumonia was in early prominent use. The first use of Prontosil, a sulfonamide compound received much publicity. Because of the lack of effective measures of treatment, my tenure in the pediatric service was mixed with moments of despair. During that period only 3 out of 4 children admitted for the treatment of pneumonia survived.

In contrast, despite its physical isolation, the Hawaiian botanical pharmacopoeia of the discovery era is believed to include more than 100 plants used in and believed to be of beneficial effect. Only a few of the more prominent are listed:

- *Popolo*.—Used for respiratory infections. Poultices prepared from the leaves was a favorite choice for boils, burns, and wounds.
- *Awa* plant (*kawa, kava*).—A drink prepared from the root provided the ceremonial beverage of the South Pacific Islands. Chewing the root definitely relieves pain. Drinking the root stock causes sensory and muscular paralysis. The alcoholic content of the fermented root provided the alcohol that effected a sterilization of wounds.
- *Kukui* nut.—The kernels undoubtedly had a laxative effect. There are many Hawaiian plants that produce a profound laxative effect and were regarded as purgatives to treat systemic edema.
- *Noni*.—The leaves and bark are prepared as a tonic and are used to treat urinary disorders and muscle and joint pains.
- *Puakala*.—A Hawaiian poppy related to the opium poppy, it is a favorite medicine for killing pain.
- *Ulu*.—Sap from the stem of the *ulu* (breadfruit) was useful in the treatment of stomach ulcers; it is still commonly used in Samoa for that purpose.
- *Ohia lehua*.—This plant is native to Hawaii and Polynesia; the flower is used to ease childbirth and leaf bud tea is used as a tonic and to treat colds.

In the highly structured Hawaiian society, the medical *kahuna* administered to the sick. In ancient Hawaii, *kahuna* were far more than priests of a religious order, mystics or sorcerers, or the medicine men of primitive tribes. They were selected in childhood because of their high intelligence and their ability to learn. They were usually selected from the families of the ruling class, occasionally of the *kahuna* and rarely from the commoners. The *kahuna* were the scholars and educated professionals of their time. They used their well-developed powers of mind analysis, thought control, and hypnosis to the fullest on conditioned subjects, with frequent references to *akua* or spirits and gods.

Long before Linnaeus devised the system of plant taxonomy, the *kahuna* in Hawaii had already evolved a classification system of plants. Both Drs Charles Judd and George Mills had very positive opinions that careful selection and long periods of preparation and education were necessary to become a Hawaiian medical practitioner.

Referring to Charles Judd,⁴ other authorities and the Bishop Museum Bulletin of 1934,² the medical *kahuna* could be classified as:

- *Kahuna laau lapaau*.—Pharmacologist and general practitioner

- *Kahuna lomilomi*.—Physiotherapist, masseur
- *Kahuna haha*.—Diagnostician
- *Kahuna koholua*.—Surgeon (minor surgery)
- *Kahuna hai iwi*.—Bone specialist
- *Kahuna hoo hanau*.—Obstetrician

There was extensive specialization among medical practitioners. One prominent medical practitioner was the *kahuna hoo hanau*.¹ Beginning with early pregnancy, the *kahuna hoo hanau* prescribed exercises that would be helpful at parturition. They used external deep abdominal massages to change the position of the fetus to the proper position for delivery. Changing of the transverse position was considered to be a relatively easy maneuver. Converting a breech position to the normal cephalic position was considered difficult but always possible. Dr George Goto informs me that these procedures are carried out by modern obstetricians and are referred to as external version. Puerperal sepsis was not common because there was no invasion of the delivery channel by attendants and because of the cleanliness of those attending. Prominent in the history of Hawaiian medicine was the common use of psychic transfer of labor pains to the spouse or other immediate member of the family.

Psychiatric treatment was rendered by professional medical *kahuna*, many with special mystic powers. A positive response to the ministrations and decisions of the *kahuna* was possible because the populace was conditioned to access the powers of the *akua* who governed their lives; the *kahuna* were regarded as the *akua*'s messengers. There are reports by credible authorities of the missionaries that on occasions when the *kahuna* informed a subject that there was no cure for a condition and death would ensue, the subject would then go home, lie on a mat and die. The psychiatric *kahuna* rendered many sessions of personal care, using his skill of analysis, often his mystic powers and perhaps some potent herbs.

In examining the accomplishments of the Hawaiian in the medical field, it must be acknowledged that we have only fragments of information of their scientific knowledge and some of the knowledge handed down could have been altered. Despite the loss of a large part of the art of Hawaiian medicine, evidence remains to indicate that Hawaiian medicine was a very superior art at the time of the discovery era. Very definitely, modern applications of Hawaiian obstetrical practices and that of the care of the mentally ill are very beneficial. A number of investigators have attempted to isolate the pharmaceutical elements of plants used in Hawaiian medicine; Drs Nils P. Larson noted this in a personal conversation in 1934, F.L. Tabrah, F.B.M. Eveleth,³ and in 1970 Dr Windsor Cutting had very limited success in doing so. Studies on the isolation of active medicinal properties of Hawaiian medicinal plants are still continuing.

Unfortunately, too little remains of the practices of the trained medical *kahuna*. The development of an organized society of over 300,000 people by a small band of Polynesian voyagers on a small, isolated land mass—the Hawaiian Islands—is, however, irrefutable evidence of the superiority of the medical management of a remarkable society.

References

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